

# PATENT ABSTRACTS OF JAPAN

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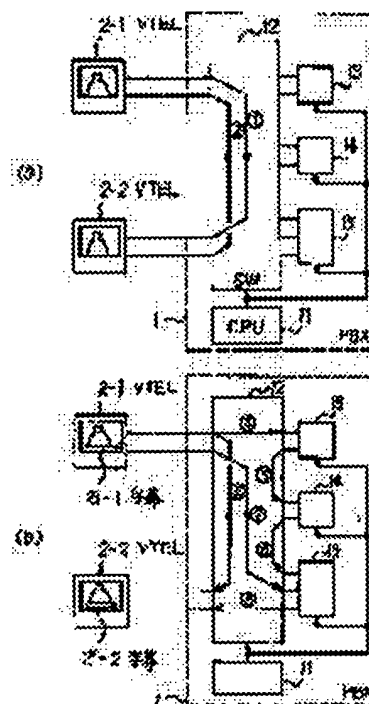
## (54) VIDEO TELEPHONE EXCHANGE SYSTEM

### (57)Abstract:

**PURPOSE:** To constitute the system so that a call can be executed while feeling an intonation and a minute nuance mutually at the time of executing a call between persons whose languages are different from each other.

**CONSTITUTION:** When an automatic translation switch of a video telephone set 2-2 is depressed, a sound signal from a video telephone set 2-1 is transmitted through a switch 12 (3), and simultaneously, transmitted (4) to a voice/text conversion module 13, and from the sound signal, text data is generated and transmitted to a text language translation module 14 through a switch (5). The text data in English is translated to Japanese language, and transmitted as translated text data to an image/text synthesizing module 15 through a switch (6).

The image/text synthesizing module synthesizes translated text data from a text language translation module and an image signal (7) from the video telephone set 2-1 so that the result is displayed in the lower part of an image as a subtitle 21-2, and transmits it to the video telephone set 2-2 (8). By such a control, the translated subtitle can be looked at together with the image while listening to a voice.



## LEGAL STATUS

[Date of request for examination]

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**CLAIMS**

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[Claim(s)]

[Claim 1] 1st conversion means by which consist of two or more TV phone machines and the electronic formula private branch exchange which holds two or more of these TV phone machines, and said electronic formula private branch exchange changes the voice from a transmitting-side TV phone machine into text data, The 2nd conversion means which performs language translation between two-piece countries, and outputs the text data generated by this 1st conversion means as translation text data, It compounds with the picture signal from the TV phone machine of said transmitting side by making into a title said translation text data generated by this 2nd conversion means. The TV phone switching system which has a transmitting means to transmit to a receiving-side TV phone machine, carries out [ voice / of a message partner ] automatic translation, and is characterized by what it compounds in an image as a title and is displayed on a TV phone machine at coincidence.

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## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the TV phone switching system which talks over the telephone mutually with a TV phone machine especially through the electronic formula private branch exchange about a TV phone switching system.

[0002]

[Description of the Prior Art] Conventionally, this kind of TV phone switching systems are both TV phone machines, and have the composition of transmitting voice and a picture signal to transparent.

[0003]

[Problem(s) to be Solved by the Invention] Since the conventional TV phone switching system mentioned above has the composition of being both TV phone machines and transmitting voice and a picture signal to transparent, it has the trouble that language does not pass mutually, in the message by those from whom language differs.

[0004]

[Means for Solving the Problem] The TV phone switching system of this invention consists of two or more TV phone machines and the electronic formula private branch exchange which holds two or more of these TV phone machines. 1st conversion means by which said electronic formula private branch exchange changes the voice from a transmitting-side TV phone machine into text data, The 2nd conversion means which performs language translation between two-piece countries, and outputs the text data generated by this 1st conversion means as translation text data, It compounds with the picture signal from the TV phone machine of said transmitting side by making into a title said translation text data generated by this 2nd conversion means, and has a transmitting means to transmit to a receiving-side TV phone machine.

[0005]

[Example] Next, this invention is explained with reference to a drawing.

[0006] Drawing 1 is the block diagram showing one example of this invention.

[0007] In drawing 1 this example The TV phone machine (henceforth, VTEL) 2-1 and 2-2, The voice and the text conversion module 13 from which it consists of VTEL 2-1 and the electronic formula private branch exchange (henceforth, PBX) 1 which holds 2-2, and PBX1 changes voice into text data, The text language translation module 14 which translates the changed text data into other language (from a Japanese text to for example, an English text), The image and the text synthesis module 15 which compounds the text translated as the picture signal, The switch 12 which connects VTEL 2-1, 2-2, voice and a text conversion module 13, the text language translation module 14, and both image and text synthesis module 15 (henceforth, SW), The central control unit (henceforth, CPU) 11 which controls the PBX1 whole is had and constituted.

[0008] Drawing 2 shows the flow of the sound signal in this example, and a picture signal, and it is drawing showing the flow of each signal in case the sound signal of a transmitting side is translated into other language and drawing in which (a) shows the flow of each signal in case a sound signal is not

changed into other language, and (b) are transmitted to a receiving side.

[0009] Next, actuation of this example is explained using drawing 2.

[0010] In (a) of drawing 2, when VTEL 2-1 and VTEL 2-2 talk over the telephone, direct continuation of sound signal way \*\* and the picture signal way \*\* is first carried out through SW12 among VTEL 2-1 and VTEL2-2, and it is transmitted, without changing the voice of the other party, and an image. Suppose that the operator of VTEL 2-1 speaks English, and the operator of VTEL 2-2 is speaking Japanese in this example.

[0011] When the depression of the automatic translation switch (illustration abbreviation) built in VTEL 2-2 is carried out, as the operator of VTEL 2-2 shows (b) of drawing 2, next, the sound signal from VTEL 2-1 \*\* which is transmitted to \*\*, and voice and a text conversion module 13 at being transmitted to VTEL 2-2 through SW12, and coincidence, generates text data from \*\* and a sound signal, and is transmitted to the text language translation module 14 through SW12. English text data is \*\* which is translated into Japanese text data with the text language translation module 14, and is transmitted to an image and the text synthesis module 15 through SW12 as translation text data. An image and the text synthesis module 15 are \*\* which compounds from VTEL 2-1 to picture signal \*\*, and is transmitted to VTEL 2-2 so that it may be displayed on the image lower part by making the translation text data from the text language translation module 14 into a title 21-2.

[0012] By the above control, the operator of VTEL 2-2 can see the title 21-2 translated into Japanese together with an image, hearing the voice of the operator of VTEL 2-1.

[0013] Similarly, the operator of VTEL 2-1 can see the title 21-1 translated into English together with an image, hearing the voice of the operator of VTEL 2-2.

[0014]

[Effect of the Invention] 1st conversion means by which this invention consists of two or more TV phone machines and the electronic formula private branch exchange which holds two or more of these TV phone machines as explained above, and the electronic formula private branch exchange changes the voice from a transmitting-side TV phone machine into text data, The 2nd conversion means which performs language translation between two-piece countries, and outputs the text data generated by this 1st conversion means as translation text data, By compounding with the picture signal from the TV phone machine of a transmitting side by making into a title the translation text data generated by this 2nd conversion means, and having a transmitting means to transmit to a receiving-side TV phone machine Since automatic translation is carried out [ voice / of a message partner ], it compounds in an image as a title and it displays on a TV phone machine at coincidence, a partner's voice can be heard without being changed and a message of those fellow from whom language differs is also effective in the ability to talk over the telephone, while taking in intonation and fine nuance.

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**TECHNICAL FIELD**

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[Industrial Application] This invention relates to the TV phone switching system which talks over the telephone mutually with a TV phone machine especially through the electronic formula private branch exchange about a TV phone switching system.

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PRIOR ART

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[Description of the Prior Art] Conventionally, this kind of TV phone switching systems are both TV phone machines, and have the composition of transmitting voice and a picture signal to transparent.

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**EFFECT OF THE INVENTION**

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[Effect of the Invention] 1st conversion means by which this invention consists of two or more TV phone machines and the electronic formula private branch exchange which holds two or more of these TV phone machines as explained above, and the electronic formula private branch exchange changes the voice from a transmitting-side TV phone machine into text data, The 2nd conversion means which performs language translation between two-piece countries, and outputs the text data generated by this 1st conversion means as translation text data, By compounding with the picture signal from the TV phone machine of a transmitting side by making into a title the translation text data generated by this 2nd conversion means, and having a transmitting means to transmit to a receiving-side TV phone machine Since automatic translation is carried out [ voice / of a message partner ], it compounds in an image as a title and it displays on a TV phone machine at coincidence, a partner's voice can be heard without being changed and a message of those fellow from whom language differs is also effective in the ability to talk over the telephone, while taking in intonation and fine nuance.

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[Translation done.]



JAPANESE

[JP,05-260193,A]

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<u>CLAIMS</u>	<u>DETAILED DESCRIPTION</u>	<u>TECHNICAL FIELD</u>	<u>PRIOR ART</u>	<u>EFFECT OF THE</u>
<u>INVENTION</u>	<u>TECHNICAL PROBLEM</u>	<u>MEANS</u>	<u>EXAMPLE</u>	<u>DESCRIPTION OF DRAWINGS</u>
<u>DRAWINGS</u>				

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**MEANS**

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[Means for Solving the Problem] The TV phone switching system of this invention consists of two or more TV phone machines and the electronic formula private branch exchange which holds two or more of these TV phone machines. 1st conversion means by which said electronic formula private branch exchange changes the voice from a transmitting-side TV phone machine into text data, The 2nd conversion means which performs language translation between two-piece countries, and outputs the text data generated by this 1st conversion means as translation text data, It compounds with the picture signal from the TV phone machine of said transmitting side by making into a title said translation text data generated by this 2nd conversion means, and has a transmitting means to transmit to a receiving-side TV phone machine.

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**DESCRIPTION OF DRAWINGS**

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[Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing one example of this invention.

[Drawing 2] The flow of the sound signal in this example and a picture signal is shown, and it is drawing showing the flow of each signal in case the sound signal of a transmitting side is translated into other language and drawing in which (a) shows the flow of each signal in case a sound signal is not changed into other language, and (b) are transmitted to a receiving side.

[Description of Notations]

1 Electronic Formula Private Branch Exchange (PBX)

2-1, 2-2 TV phone machine (VTEL)

11 Central Control Unit (CPU)

12 Switch (SW)

13 Voice and Text Conversion Module

14 Text Language Translation Module

15 Image and Text Synthesis Module

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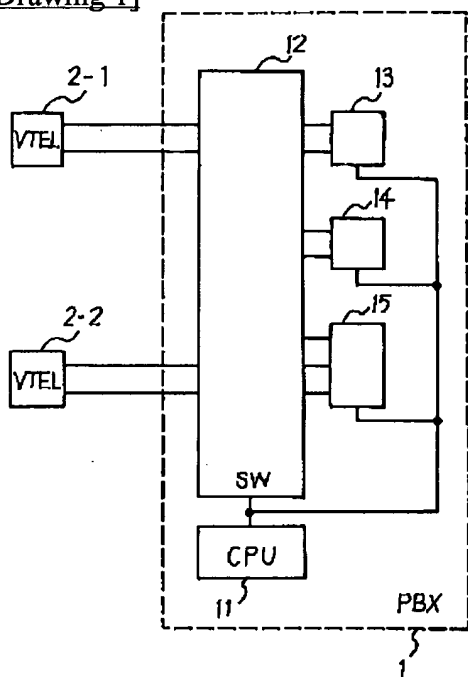
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DRAWINGS

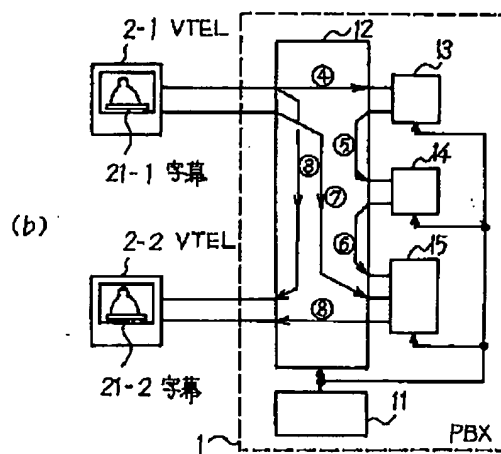
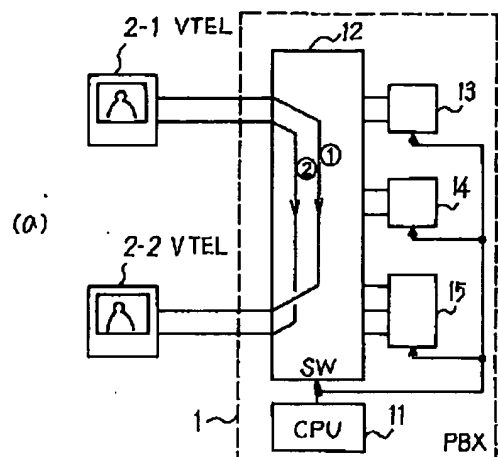
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[Drawing 1]



- 13 : 音声・テキスト変換モジュール  
14 : テキスト言語翻訳モジュール  
15 : 画像・テキスト合成モジュール

[Drawing 2]



[Translation done.]